

# Strategy Research Project

## Effectiveness Through Control: Centralized Execution in Air Mobility Operations

by

Lieutenant Colonel Barry Allen Dickey  
United States Air Force



United States Army War College  
Class of 2013

### DISTRIBUTION STATEMENT: A

Approved for Public Release  
Distribution is Unlimited

This manuscript is submitted in partial fulfillment of the requirements of the Master of Strategic Studies Degree. The views expressed in this student academic research paper are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

The U.S. Army War College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

**REPORT DOCUMENTATION PAGE**
*Form Approved  
OMB No. 0704-0188*

The public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                    |                                         |                                                 |                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------|-------------------------------------------------|----------------------------------------|
| <b>1. REPORT DATE (DD-MM-YYYY)</b><br>xx-03-2013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>2. REPORT TYPE</b><br>STRATEGY RESEARCH PROJECT | <b>3. DATES COVERED (From - To)</b>     |                                                 |                                        |
| <b>4. TITLE AND SUBTITLE</b><br>Effectiveness Through Control: Centralized Execution in Air Mobility Operations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                    |                                         | <b>5a. CONTRACT NUMBER</b>                      |                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                    |                                         | <b>5b. GRANT NUMBER</b>                         |                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                    |                                         | <b>5c. PROGRAM ELEMENT NUMBER</b>               |                                        |
| <b>6. AUTHOR(S)</b><br>Lieutenant Colonel Barry Allen Dickey<br>United States Air Force                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                    |                                         | <b>5d. PROJECT NUMBER</b>                       |                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                    |                                         | <b>5e. TASK NUMBER</b>                          |                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                    |                                         | <b>5f. WORK UNIT NUMBER</b>                     |                                        |
| <b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b><br>Colonel James A. Crutchfield<br>Department of Command, Leadership and Management                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                    |                                         | <b>8. PERFORMING ORGANIZATION REPORT NUMBER</b> |                                        |
| <b>9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b><br>U.S. Army War College<br>122 Forbes Avenue<br>Carlisle, PA 17013                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                    |                                         | <b>10. SPONSOR/MONITOR'S ACRONYM(S)</b>         |                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                    |                                         | <b>11. SPONSOR/MONITOR'S REPORT NUMBER(S)</b>   |                                        |
| <b>12. DISTRIBUTION / AVAILABILITY STATEMENT</b><br>Distribution A: Approved for Public Release. Distribution is Unlimited.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                    |                                         |                                                 |                                        |
| <b>13. SUPPLEMENTARY NOTES</b><br>Word Count: 5,335                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                    |                                         |                                                 |                                        |
| <b>14. ABSTRACT</b><br>To achieve effectiveness and efficiency in mobility operations, Air Force leaders have employed a command and control structure that many airmen view as centralized execution. This paper examines the Air Force supreme tenet of centralized control and decentralized execution as it relates to these operations and proposes the Air Operations Center as the appropriate level of control and execution. Recent examples prove this concept and demonstrate how decentralization to no lower than the AOC-level enables four of the other tenets of airpower listed in Air Force doctrine—flexibility, synergistic effects, concentration and priority. This level of command and control poses potential risks to the concept of decentralized execution, but training and a better understanding of the supreme tenet will mitigate these risks and preserve the benefits of decentralized execution. |                                                    |                                         |                                                 |                                        |
| <b>15. SUBJECT TERMS</b><br>Flexibility, Synergy, Concentration, Priority, Efficiency, Decentralized, Doctrine                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                    |                                         |                                                 |                                        |
| <b>16. SECURITY CLASSIFICATION OF:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                    | <b>17. LIMITATION OF ABSTRACT</b><br>UU | <b>18. NUMBER OF PAGES</b><br>30                | <b>19a. NAME OF RESPONSIBLE PERSON</b> |
| a. REPORT<br>UU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | b. ABSTRACT<br>UU                                  |                                         |                                                 | c. THIS PAGE<br>UU                     |



USAWC STRATEGY RESEARCH PROJECT

**Effectiveness Through Control: Centralized Execution in Air Mobility Operations**

by

Lieutenant Colonel Barry Allen Dickey  
United States Air Force

Colonel James A. Crutchfield  
Department of Command, Leadership and Management  
Project Adviser

This manuscript is submitted in partial fulfillment of the requirements of the Master of Strategic Studies Degree. The U.S. Army War College is accredited by the Commission on Higher Education of the Middle States Association of Colleges and Schools, 3624 Market Street, Philadelphia, PA 19104, (215) 662-5606. The Commission on Higher Education is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation.

The views expressed in this student academic research paper are those of the author and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

U.S. Army War College  
CARLISLE BARRACKS, PENNSYLVANIA 17013



## **Abstract**

|                 |                                                                                    |
|-----------------|------------------------------------------------------------------------------------|
| Title:          | Effectiveness Through Control: Centralized Execution in Air Mobility Operations    |
| Report Date:    | March 2013                                                                         |
| Page Count:     | 30                                                                                 |
| Word Count:     | 5,335                                                                              |
| Key Terms:      | Flexibility, Synergy, Concentration, Priority, Efficiency, Decentralized, Doctrine |
| Classification: | Unclassified                                                                       |

To achieve effectiveness and efficiency in mobility operations, Air Force leaders have employed a command and control structure that many airmen view as centralized execution. This paper examines the Air Force supreme tenet of centralized control and decentralized execution as it relates to these operations and proposes the Air Operations Center as the appropriate level of control and execution. Recent examples prove this concept and demonstrate how decentralization to no lower than the AOC-level enables four of the other tenets of airpower listed in Air Force doctrine—flexibility, synergistic effects, concentration and priority. This level of command and control poses potential risks to the concept of decentralized execution, but training and a better understanding of the supreme tenet will mitigate these risks and preserve the benefits of decentralized execution.



## **Effectiveness Through Control: Centralized Execution in Air Mobility Operations**

The Berlin Airlift in 1948 is widely considered in Air Mobility circles as a shining example of airlift efficiency, effectiveness and safety. During that operation, dubbed “Operation Vittles,” allied mobility air forces delivered over two million tons of life-sustaining supplies to the blockaded city in one of the first conflicts of the Cold War. To accomplish this monumental feat the commander, General William H. Tunner, established tactics, techniques and procedures (TTPs) that enabled aircraft to land at three-minute intervals in Berlin. “Tunner’s approach required the careful coordination of every aspect of the airlift, including detailed procedures, exact duplication, and precise execution of each phase of the operation from on-load to the return landing.”<sup>1</sup> These TTPs essentially removed the decision-making authority from Tunner’s subordinate commanders and individual aircrews alike, flying in the face of the most sacred of air power tenets: centralized control and decentralized execution. Still, his philosophy led to the most successful airlift effort of its time and has held up as the model for effective and efficient airlift operations.

Commanders in Air and Space Operations Centers (AOC) around the globe control airlift and tanker sorties much the same today as did General Tunner during the Berlin Airlift. The 618th Air and Space Operations Center, also known as the Tanker/Airlift Control Center (TACC) at Scott Air Force Base, Illinois, plans and controls the majority of strategic, or intertheater, airlift and tanker sorties. For intratheater operations, various AOCs, such as United States Central Command’s (USCENTCOM) Combined AOC (CAOC) at Al Udeid Air Base, Qatar plan and control all sorties in the theater. In both cases, the AOC delegates only a limited amount of tactical authority to subordinate commanders. Advancement in real-time communication systems and their

proliferation among mobility aircraft threaten to further limit that delegation. Even so, effectiveness and efficiency of airlift operations continue to increase, bringing into question the validity of the concept of decentralized execution.

Every Mobility Air Forces (MAF) operation strives to achieve an optimal level of effectiveness and efficiency. These two goals are at times indirectly proportional, but they are not necessarily mutually exclusive. The priority for effectiveness or efficiency varies with type of operation. For instance, effectiveness measures the success of an emergency resupply airdrop, while efficiency is more important in intertheater airlift. Operational art, then, is required to determine the appropriate levels of control needed to achieve effectiveness and efficiency. In the MAF community, years of experience prove strict control of mobility assets yields maximum effectiveness and efficiency. This paper examines the Air Force tenet of centralized control and decentralized execution as it relates to MAF operations and proposes the AOC as the appropriate level of control and execution. The first part of this paper explores four of the six other tenets of airpower listed in Air Force doctrine—flexibility, synergistic effects, concentration and priority—and demonstrates how decentralization to no lower than the AOC-level enables those tenets, and achieves effectiveness and efficiency in recent MAF operations. The second part analyzes the risks associated with this centralized command and control architecture and proposes a course of action to mitigate those risks while preserving the benefits of decentralized execution.

### A Shift toward Centralized Execution

Air Force Doctrine Document 1 (AFDD 1) clearly identifies centralized control and decentralized execution as the most important of the airpower tenets, calling them “the fundamental organizing principles for airpower, having been proven over decades of

experience as the most effective and efficient means of employing it.”<sup>2</sup> The doctrine describes the first part of the tenet, centralized control, as commanding airpower, which “should be accomplished by an Airman at the air component commander level who maintains a broad focus on the Joint Forces Commander’s (JFC) objectives to direct, integrate, prioritize, plan, coordinate, and assess the use of air, space, and cyberspace assets in any contingency across the range of operations.”<sup>3</sup> AFDD 1 defines the second part of this most sacred team of airpower tenets, decentralized execution, as “the delegation of authority to designated lower-level commanders and other tactical-level decision makers to achieve effective span of control and to foster disciplined initiative and tactical flexibility.”<sup>4</sup> Airpower proponents have dedicated hundreds of studies to the benefits of this tenet, defending it as the enabler of principles of war as well as other airpower tenets. But does the Air Force truly exercise decentralized execution? Robust AOCs and real-time communication capability blur the line between centralized and decentralized execution even further.

Air Force senior leaders address this threat to decentralized execution in AFDD 1 by offering “once a sortie has been tasked through the air tasking order, a JFACC (Joint Forces Air Component Commander) and AOC staff should not normally get involved in how the mission is executed.”<sup>5</sup> While this is valid guidance for theater commanders and their staffs, they can, and routinely do affect the execution of sorties by codifying rules of engagement (ROE), Special Instructions (SPINs) and developing theater tactics, techniques, and procedures (TTPs). For example, the AOC-produced guidance listed above can dictate the run-in heading, altitude, and time of a routine airdrop in any theater. Additionally, aircrews are required to request approval for any deviations to the

established guidance through their controlling AOC. This strict command and control structure supports a widely accepted theory among Air Force officers; that "centralized execution happens if a sortie carries out its mission under direct control of an air and space operations center (AOC) (whether a theater AOC, the tanker airlift control center, or the space AOC), with no other echelon in the chain of command issuing orders."<sup>6</sup> In OEF airdrop operations, AOC's delegate very little execution authority, if any, to subordinates, including the aircrew. However, despite this tendency to centrally execute missions from the AOC, coalition aircrews have delivered unprecedented airdrop success in OEF. It is possible that strict control and execution of airdrop missions increases effectiveness and efficiency. AOCs similarly exercise strict control and execution of airland, aerial refueling, and aeromedical evacuation missions, causing some airmen to view this type of command and control as contradictory to current Air Force doctrine. But perhaps MAF senior leaders have determined a higher level of centralized execution achieves their desired standard of effectiveness and efficiency. Recent MAF operations highlight the success of this type of command and control architecture and demonstrate how the shift toward centralized execution enables the other tenets of airpower; the first to be addressed are flexibility and versatility.

#### Centrally Executed Flexibility and Versatility

One of airpower's distinct advantages over land and sea power is its inherent flexibility and versatility. As AFDD 1 explains, "Flexibility allows airpower to shift from one campaign objective to another, quickly and decisively...to re-role assets quickly from a preplanned mission to support an unanticipated need..."<sup>7</sup> In MAF operations, aeromedical evacuation provides a good example of this flexibility, particularly in unplanned emergency situations. The Air Force accomplishes these time-critical sorties

using the best-suited mobility airframe available at the time of the emergency and pairing it with an aeromedical team that cares for the patients while in flight. This concept of operations provides the maximum in scheduling flexibility, as it utilizes all mobility aircraft rather than a specific, dedicated airframe by reconfiguring the asset “into a flying hospital of sorts with cardiac monitors, defibrillators, intubation devices, litters and various supplies to sustain many types of patients.”<sup>8</sup> Air Mobility Command (AMC), the Air Force Major Command responsible for aeromedical evacuation operations terms this concept as designated, versus dedicated airlift. A 2006 Air Force Magazine article described the flexibility of this concept, highlighting “When an injured service member needs to be moved, the first available aircraft can be readily identified with up-to-the-minute knowledge of where airlifters are. The pallets, medical teams, and other personnel will already be ready to go.”<sup>9</sup>

Realizing the flexibility that enables these missions requires a robust and effective command and control system, as well as in-depth coordination between AOCs from several different theaters. Air Force Doctrine Document 3-17 (AFDD 3-17), Air Mobility Operations, establishes Aeromedical Evacuation Control Teams (AECT) to function as one of four teams in an Air Mobility Division (AMD), which is part of a theater AOC. The AECT is “responsible for aeromedical evacuation (AE) operational planning, scheduling, tasking, and assisting the AMCT (Air Mobility Control Team) with operations execution and monitoring. The AECT coordinates airlift support and evaluates available air mobility airframes assigned to or transiting the theater to meet theater AE requirements.”<sup>10</sup> Additionally, each AMD establishes its own roles and responsibilities as determined by its senior leaders and their interpretation of established doctrine. For

instance, Air Force Central Command's AMD states the responsibilities of their AECT in their published fact sheet.

Aeromedical Evacuation Control Team (AECT) provides operational planning, scheduling, and execution of scheduled and unscheduled aeromedical evacuation missions through the appropriate AE elements. The AECT advises and briefs the CAOC Director on AE issues. Aeromedical evacuation operations provide centralized control of intra-theater AE operations within the AOR, and the AECT assists with inter-theater AE operations departing or transiting the AOR.<sup>11</sup>

Common to both of these charters is the term “execution,” implying that AOCs and their staffs are responsible for executing aeromedical evacuation missions.

This precise control and execution has led to the unprecedented improvements of aeromedical evacuation missions, and has saved countless lives through the flexibility enabled by that control. In his address to the International Aeromedical Evacuation/En Route Care Conference in July, 2011, the Air Force Surgeon General, Lieutenant General Charles Green stated, “Over the last ten years, AE professionals have moved more than 90 thousand patients by air, 10 thousand of those were critical care patients. And of those 90 thousand, only four patients have died while in the care of aeromedical specialists.”<sup>12</sup> While those statistics speak to the great professionalism of aeromedical specialists, it also speaks to the efficiency and effectiveness of the control architecture for these missions. Control and execution authority, in this case, remains at the AOC level and are not delegated to subordinate commanders. On many sorties, times of takeoff and arrival, in-flight routing, altitudes, and even the type of approach to be flown at the destination are determined by AOCs leaving little execution authority to subordinates below that level. As an example of this centralized execution, Major General Quentin Petersen, former operations director for AMC explains “If a C-17 is on final approach when an aeromedical evacuation is needed, airmen would be given

prompt instructions...“Clear these three pallets—we’re putting these [injured] folks on, and by the way, you’re not going to X, you’re going to Ramstein.”<sup>13</sup> Even so, the statistics for survival rates and the ability to quickly transport patients to the care they require point to the success of centralized execution for the aeromedical evacuation mission. This command and control structure can also enable another of airpower’s tenets in MAF operations; creating synergistic effects.

### Centralized Synergy

According to AFDD 1, “The proper application of a coordinated force across multiple domains can produce effects that exceed the contributions of forces employed individually.”<sup>14</sup> As one of airpower’s tenets, the concept of creating synergistic effects applies to nearly every aspect of MAF operations. In fact, AFDD 3-17 states “the net effect of nearly every air mobility operation is synergy.”<sup>15</sup> But is synergy created through decentralized or centralized execution in MAF operations? AFDD 3-17 cites the synergistic effects created by combining sister-service and coalition capabilities during Operation Iraqi Freedom (OIF), specifically the airdrop insertion of the 173rd Airborne Brigade in March 2003. An examination of that mission reveals the true application of control and execution in today’s MAF operations.

On March 26, 2003, more than 1,000 soldiers of the 173rd Airborne Brigade parachuted from 12 Boeing C-17 Globemaster III aircraft into northern Iraq, 8 days after the initiation of Operation Iraqi Freedom...During the next 96 hours, C-17s airlifted the second echelon of the brigade’s forces into Bashur, consisting of over 400 vehicles, 2,000 soldiers, and 3,000 tons of equipment.<sup>16</sup>

The close coordination required for this mission between Air Force and Navy fighter escorts, tankers and C-17 aircraft called for detailed and precise planning, command and control, and execution. This task fell to the Coalition Forces Air

Component Commander (CFACC) at the AOC in Al Udeid, Qatar. For planning the tactical elements of the mission however, the AOC relied upon the expertise of the airborne mission commander and his staff. That mission commander, Lieutenant General Robert Allardice, then a Colonel, reflected “We were able to plan early on much more deliberately. And we had a great connection with the people who build the Air Tasking Order, which is the guide for all air assets.”<sup>17</sup> Utilizing this tactical expertise during the planning process and incorporating the inputs of the subordinate commander into the Air Tasking Order (ATO), the AOC created synergy between the multitudes of aircraft required for the mission.

By definition, the ATO is “a powerful tool that aids the Combined Air Component Commander to efficiently and effectively plan, organize and direct air operations through centralized planning.”<sup>18</sup> It is an authoritative document that is the culmination of extensive planning and coordination and is a CFACC’s method of controlling the flow of aircraft in a specific area’s airspace. In effect, the ATO creates synergy by fusing the actions of joint and coalition partners into an actionable daily air order of battle. In their article *Theater Mobility Forces: Command and Control Doctrine*, Robert Swisher, John Holly and David Foster explain the “joint air operations center expresses the will of the COMAFFOR/JFACC through the air tasking order (ATO) and is the single point of contact for ATO planning, coordination, and execution.”<sup>19</sup> During the airdrop into Bashur, the ATO dictated air routes, time over target, and altitudes for the numerous aircraft supporting the mission. General Allardice’s comments above indicate the executors of this mission were extensively involved in the planning, but the ATO directed the execution of the mission. Therefore, by requiring approval for any changes

to the flight profiles of these aircraft once they had launched, the JFACC centrally controlled and executed this mission through the AOC.

Perhaps because of the sheer number of aircraft involved and the requirement for precise coordination between the ground and air elements the execution of the Bashur airdrop was not decentralized beyond the AOC level. Based on the results of the mission, that was not such a bad thing. Through centralized control at the AOC and centralized execution through the ATO, coupled with the appropriate level of decentralized tactical authority and planning, the joint air forces inserted and sustained a combat brigade in an anti-access environment without any aircraft losses. In this case, centralized control and execution created the synergy required to accomplish the task. Not surprisingly, this level of command and control also enables the concentration and prioritization of MAF aircraft for world-wide missions.

#### Concentration and Priority through Centralization

Concentration and priority are two separate tenets of airpower but are inseparable in MAF operations. AFDD 3-17 highlights the importance of these two tenets based on the limited availability of mobility aircraft.

Air mobility forces are a finite but crucial resource to the Air Force and the nation. Consequently, the majority of those assets are centrally controlled by one command (AMC) that can quickly shift those resources wherever the combatant commanders or other government agencies need them most.<sup>20</sup>

As AFDD 3-17 goes on to explain, “Concentration allows Airmen to maximize air mobility effects while, at the same time, reduce their exposure to risk.”<sup>21</sup> Prioritizing these assets is the critical next step in concentrating them to achieve the desired effectiveness and efficiency. By prioritizing limited assets and through concentration, MAF forces provide “the key to employing overwhelming air and space power at the

right place and at the right time.”<sup>22</sup> MAF aircraft fly global and theater sorties on an hourly basis, adding to the complexity of coordinating, controlling and executing these missions. Intratheater airlift and tanker missions are centrally controlled and, to an extent centrally executed through the aforementioned ATO. The 618th TACC normally controls and executes intertheater missions using the Global Decision Support System (GDSSII) to prioritize and concentrate MAF forces.

AMC unveiled their latest command and control asset, GDSSII, in May of 2005. Then Director of Communication and Information for AMC, Colonel Earl Matthews, said of GDSSII, “It is the most complex and comprehensive (command and control) system fielded in the Air Force. Operating on unclassified and classified networks, (the system) will be AMC's one-stop-shop (command and control) system, providing unprecedented visibility of aircrews, cargo aircraft and ongoing missions regardless of their location.”<sup>23</sup> Through GDSSII, mobility directors at TACC schedule missions, plan routes, dictate fuel and cargo loads, provide diplomatic clearances, and even supply weather and special instructions for airmen. They then task these missions to subordinate units who populate GDSSII with specific aircrew information and aircraft tail numbers. Any changes to the planned profile that are requested by the subordinate unit, i.e. route of flight, en route stops or changes in the fuel load, require the approval of TACC. Therefore, the GDSSII command and control mechanism leaves only the most basic of decisions to the subordinate commanders responsible for flying the mission. This mechanism, however, proved invaluable in concentrating and prioritizing airlift assets to achieve the maximum effectiveness and efficiency during recent Haitian humanitarian relief operations.

The disaster triggered by a 7.0 magnitude earthquake on the island-nation of Haiti tested the airpower tenets of priority and concentration in January, 2010. This event caused significant destruction and casualties in excess of 112,000 deaths and 194,000 injuries. Additionally, it left 500,000 Haitians in need of humanitarian assistance.

At the time of the earthquake, AMC was already heavily supporting worldwide operations, including two combat theaters in Iraq and Afghanistan. In fact, most of the personnel assigned to the 618 TACC, AMC's air and space operations center, were focused on the surge operations for the Department of Defense's Afghan plus-up. Moving additional troops and equipment halfway around the world on the timetable required by the US Army entailed a substantial logistical feat in its own right. Adding a large humanitarian operation, as the Haiti disaster would become, meant the 618 TACC mission planners had to shift from an almost single-minded focus of accelerating the airflow and increasing the number of arrivals in Afghanistan to including the building of a plan on how they were going to support a sizeable airflow to Haiti. Because of the commitments in Afghanistan, this had to be done with minimal interruption to that airflow.<sup>24</sup>

Obviously, this relief action required the correct prioritization of limited MAF assets to support both theaters and to concentrate mobility airpower in the right places and times. The 618th TACC quickly went to work on Operation UNIFIED RESPONSE, functioning "as the mobility operations hub, planning and directing airlift and air refueling operations."<sup>25</sup> Through GDSSII, the 618th TACC was able to plan and execute these missions using aircraft and crews from AMC, Pacific Air Forces, Air Education and Training Command, Air Force Special Operations Command, Air Force Reserve Command and the Air National Guard. The 618th TACC strictly controlled the routes of flight and arrival and departure times into the Port-au-Prince airport, "essentially executed directional authority over flights into and out of Haiti's airspace."<sup>26</sup> The 618th TACC provided priority and concentration by centrally controlling and executing

these missions. By the end of the operation in June, 2010, MAF aircraft had flown 4868 sorties, transported 48,996 passengers and delivered 26,828 short tons of life-saving supplies and equipment to and from Haiti.<sup>27</sup> These results clearly demonstrate how, through the appropriate level of control and execution, MAF forces were concentrated and prioritized to achieve effectiveness and efficiency. If this type of command and control produces the required results, why, then, do airmen bristle at the thought of centralized execution? Perhaps there is a misunderstanding of the supreme tenet of decentralized execution.

#### Understanding Decentralization

Aeromedical evacuations, the combat airdrop in Iraq and airlift and tanker support for relief efforts in Haiti are all good examples of how MAF forces achieve flexibility, synergy and concentration and deliver with effectiveness and efficiency. Each of these missions demonstrates the tendency of Combatant Commanders to retain control and execution of air operations at the AOC level. Is this the appropriate level of decentralization, or is this a violation of the most sacred of airpower tenets as written by the Air Force doctrinal framers? Examining the origins of the tenet provides the answer.

The Air Force first introduced centralized control and decentralized execution as a tenet in 1971, but did not offer any real explanation of the concept in doctrine until 1992. Basic aerospace doctrine of the time explained “that the tenet evolved to correct deficiencies in World War II, where airpower was divided up ineffectively, and Vietnam, where airpower was controlled too tightly at too high a level.”<sup>28</sup> Previous editions of Air Force doctrine had attempted to codify the concept of decentralized execution through a variety of explanations. In his 2005 doctoral thesis, Lieutenant Colonel Michael Kometer, USAF, describes the different definitions as they have evolved since 1971.

But in the 1971 version, the wording was “centralized allocation and direction and decentralized control and execution.” It was the 1975 version that first called for “centralized control, decentralized execution, and coordinated effort.” Then in 1979, the document attempted to lay out the division of labor between higher echelon and lower echelon commanders. It said the former should “define the missions and tasks, and then direct lower echelons to conduct the operations,” while the lower echelons should be responsible for “details for mission planning.” In fact, this edition claimed, the principle of “decentralized execution” reflected an “aspect of our national character,” which was to trust and enable individuals to perform to the best of their abilities.<sup>29</sup>

This concerted effort to ingrain decentralized execution into Air Force lexicon and doctrine was overwhelmingly a Combat Air Forces (CAF; fighter and bomber community) initiative. As mentioned earlier, the tight control of these assets by political leaders and the level of involvement by the same in target selection during the Vietnam War had hardened senior Air Force leaders against their civilian superiors. So much so that General Charles Horner, the JFACC during Operations DESERT SHEILD and DESERT STORM reflected “if you want to know whether war is going to be successful or not, just ask where the targets are being picked. If they say, “We picked them in Washington,” get out of the country. Go to Canada until the war is over because it is a loser.”<sup>30</sup> Since 1971, airpower advocates have dedicated numerous studies to the concept of decentralized execution but, interestingly, very few of these studies mention the merits of the concept when discussing MAF operations.

At its most basic level, decentralized execution is the delegation of authority to the lowest level that facilitates the accomplishment of a task. When considering the application of this concept, commanders must determine where the lowest level resides. The successes of MAF operations since World War II and as illustrated through the examples above suggest that the lowest level for execution authority resides at the AOC. MAF commanders and planners can achieve flexibility, synergy and concentration

only through strict control of finite mobility assets. While subordinate commanders below the AOC level sometimes view this method as centralized control and execution, combatant commanders have not violated the supreme tenet as they have delegated authority to the most appropriate level that achieves both effectiveness and efficiency. And since this method prevails in MAF operations, Air Force doctrine must provide for a better understanding of decentralized execution.

The problem with the term “decentralized execution” comes from a lack of a common definition. Not surprisingly, the various definitions and evolving nature of this concept make it difficult to understand and apply in the MAF community. Kometer summarizes this problem in his essay.

The concept of “centralized control and decentralized execution” is confusing, and it means something different to everyone involved. Further, the language is ambiguous. What is “control” to one person may be “execution” to another. In fact, is not control a part of execution? The 1971 AFM (Air Force Manual) 1-1 seemed to think so.<sup>31</sup>

As written in AFDD 1, the practice of decentralized execution can “foster disciplined initiative and tactical flexibility. It allows subordinates, all the way down to the tactical level, to exploit situational responsiveness and fleeting opportunities in rapidly changing, fluid situations.”<sup>32</sup> These are the inherent benefits, but are they the only reason for the concept? The majority of research on the origins of this tenet indicates senior Air Force leaders were trying to prevent undue influence from those outside airpower circles. This concern is even more valid today because of near real-time communications capabilities and the strategic impact of airpower. Air Force doctrinal authors attack this concern through the airpower tenet of balance, explaining “an Airman is uniquely—and best—suited to determine the proper theater-wide balance between offensive and defensive air operations, and among strategic, operational, and tactical applications.”<sup>33</sup>

Additionally, the establishment of the JFACC in Joint doctrine attempts to ensure airpower remains under the command of an airman. Together, the tenet of balance and the JFACC guard against the undue influences that dilute airpower's effectiveness. Disciplined initiative, tactical flexibility and situational responsiveness do, however, remain vital capabilities in air operations. As such, MAF doctrine must preserve and encourage these capabilities as execution becomes more and more centralized.

#### Risks and Mitigation

Since MAF forces have demonstrated the benefits of centrally controlled and executed operations, and have in fact practiced centralized execution since World War II, MAF doctrine must change. Air Mobility commanders, planners and aircrew need a better definition—one that clearly explains the concept and protects the intent of decentralized execution yet highlights the flexibility, synergy and concentrating effects of centralized execution during MAF operations. Therefore, this paper advocates the following as clarifying guidance in AFDD 3-17:

Often in large air mobility efforts, precise control and execution is required to facilitate the flexibility, synergy and concentration of forces that make those efforts successful. In such cases, centralized control and execution at the AOC-level is the preferred method of employment as it serves as an enabler of mobility airpower and garners maximum efficiency.

Air Force doctrine should include case studies such as those included in this paper to illustrate this concept. Furthermore, AFDD 3-17 should include guidance that protects and fosters flexibility and disciplined initiative at the tactical level. In his article, “Centralized Execution in the Air Force,” John Schaefer offers “centralized execution redirects a sortie's effort but should not take all initiative away from the aircrew. Our entire system of training seeks to develop aircrews that can take stock of the existing tactical situation and execute their mission.”<sup>34</sup> By these measures, doctrine should

empower subordinates to determine the course of action that will lead to success in specific situations. For instance, an aircrew tasked to airdrop supplies to ground forces may be constrained by pre-planned altitudes, run-in heading, and a myriad of other restrictions, but remains empowered to deviate from the pre-planned specifics in order to accomplish the mission. Relying on aircrew expertise as it applies to the tactical situation preserves ingenuity and initiative, and ensures the effectiveness of airpower. By explaining these concepts in AFDD 3-17, MAF forces will continue to benefit from the training and expertise of their aircrew members.

Merely mentioning “centralized execution” in Air Force doctrine carries significant risk to the fundamental beliefs about the employment of airpower. Among them is the aforementioned involvement of strategic leaders in tactical decisions and execution. As Schaefer points out, “centralized execution that removes the ability to adjust to real-world conditions amounts to micromanagement and is counterproductive.”<sup>35</sup> While this is a concern for MAF forces, strategic leadership involvement has more impact on CAF forces, particularly in target selection and the ability to re-direct airborne forces.

Typically, planning and execution of MAF operations are left to the experts at the TACC or the various AOCs. Nevertheless, MAF senior leaders must recognize the risk and take the appropriate action to mitigate it.

These senior leaders must also resist the temptation to become involved in the mission execution efforts of their own subordinates. As an example of micromanagement, senior leaders at AMC receive a daily briefing on the status of individual Not-Mission-Capable (NMC) aircraft, receiving updates on aircraft parts, where those parts are in the supply chain, and how long it will take to repair the aircraft,

et cetera. This level of involvement is not in line with the concept of decentralized execution, as subordinate commanders are responsible for aircraft maintenance and the tracking of status.

In his article, "Air Force Doctrine and Leadership, Steve Michael advocates creating a separate doctrine document covering the tenets of leadership. Centralized control and decentralized execution, Michael writes, "speak expressly to leadership issues that are becoming increasingly complex due to technological advancements that bring detailed information about the battlefield into the lap of everyone involved, from the pilot in the cockpit to the four-star general at headquarters."<sup>36</sup> Leadership doctrine would aid in determining the appropriate level of delegation throughout the different levels of war by explaining the benefits of both centralized and decentralized execution and which is appropriate for specific situations. If created, leadership doctrine would help to minimize micromanagement and preserve the intent of decentralized execution.

Even greater than the risk of micromanagement by senior leaders is the risk to aircrew proficiency. MAF operations require that aircrews remain proficient in each role of their assigned platform. Aircrew proficiency and experience in making tough decisions enables this flexibility. Centralized control and execution can erode these critical capabilities by denying the authority to make those decisions. MAF leaders must guard against creating a force of aviators who are over-reliant on real-time communications, who cannot handle unexpected changes in their missions, and who are not prepared to make tactical decisions based on their commander's intent without asking for approval. Currently, the MAF community attempts to minimize this risk through training and exercises which place execution authority at the squadron and aircrew

level. MAF leaders must increase these training opportunities. Just as aircrews practice operating their aircraft with degraded equipment, they must also practice planning and executing missions with degraded support or reach-back capabilities.

Training solves the majority of these issues only if the aircrews are available to get it. With the majority of MAF aircrews deployed four or more months out of every year their availability is limited at best. Coupled with constrained budgets, training opportunities are even more scarce. For these reasons, theater AOCs must attempt to draft SPINs and ROE that maximize the benefits of centralized execution, yet delegates as much execution authority as possible to the mission commander. This will allow aircrews to gain valuable planning and decision-making experience and ensure the MAF force remains proficient in the myriad of mobility operations.

### Conclusion

Any effort to move away from decentralized execution has very few supporters in the airpower community, thus there is no epitaph for this paper. However, MAF operations since World War II have exercised some level of centralized execution and have achieved both effectiveness and efficiency. The key for Air Force leaders has been in determining the appropriate level of delegation to enable success, and for mobility operations, that level is the AOC. By decentralizing execution authority to no lower than the AOC, combatant commanders have also enabled other tenets of airpower, such as flexibility, synergistic effects, concentration and priority while reaching their required levels of effectiveness and efficiency in MAF operations. Although this method of centralized control and execution poses a potential threat to airpower's most sacred tenet, the rewards have proven to outweigh the risks. The Air Force can easily mitigate these risks through training and education of senior leaders and aircrew alike,

and by clarifying the definition and intent of decentralized execution in Air Force doctrine. By implementing the measures suggested in this paper, MAF leaders can ensure the flexibility and disciplined initiative that preserves the intent of decentralized execution while garnering the effectiveness and efficiency that comes with centralization.

## Endnotes

<sup>1</sup> Roger D. Launius and Coy F. Cross, II, "The Tunner Airlift Philosophy," *Mobility Forum 7*, no. 3 (May/June 1998): 16, in ProQuest (accessed December 28, 2012).

<sup>2</sup> U.S. Secretary of the Air Force, *Air Force Basic Doctrine, Organization and Command*, Air Force Doctrine Document 1 (Washington, DC: U.S. Secretary of the Air Force, October 14, 2011), 38.

<sup>3</sup> Ibid.

<sup>4</sup> Ibid., 39.

<sup>5</sup> Ibid., 38.

<sup>6</sup> Woody W. Parramore, "Defining Decentralized Execution in Order to Recognize Centralized Execution," *Air and Space Power Journal* 18, no. 3 (Fall 2004): 25, in ProQuest (accessed December 28, 2012).

<sup>7</sup> U.S. Secretary of the Air Force, "Air Force Basic Doctrine," 40.

<sup>8</sup> U.S. Federal News Service, "Aeromedical Evacuation 'Brings Them Back,'" August 20, 2011, in Proquest (accessed December 28, 2012).

<sup>9</sup> Bruce D. Callander and Adam J. Hebert, "The 90 Percent Solution," *Air Force Magazine*, October, 2006, 62, in Proquest (accessed December 28, 2012).

<sup>10</sup> U.S. Secretary of the Air Force, *Air Mobility Operations*, Air Force Doctrine Document 3-17 (Washington, DC: U.S. Secretary of the Air Force, July 28, 2011), 25.

<sup>11</sup> "Air Mobility Division Fact Sheet," August 9, 2008, linked from The United States Air Forces Central Command Home Page at "Air Mobility Division," <http://www.afcent.af.mil/library/factsheets/factsheet.asp?id=12153> (accessed January 2, 2013).

<sup>12</sup> J. G. Buzanowski, "Air Force Surgeon General Lays Out Future for Aeromedical Evacuation," U.S. Department of Defense Information, (July 27, 2011): 1, in Proquest (accessed December 28, 2012).

<sup>13</sup> Callander, "The 90 Percent Solution," 62.

<sup>14</sup> U.S. Secretary of the Air Force, “Air Force Basic Doctrine,” 40.

<sup>15</sup> U.S. Secretary of the Air Force, “Air Mobility Operations,” 7.

<sup>16</sup> Brian E. O’Connor and Stephen O. Fought, “Strategic Brigade Airdrop: Effects of Army Transformation and Modularity,” *Air Force Journal of Logistics* XXIX, no. 3/4 (Fall/Winter 2005): 5, in ProQuest (accessed December 17, 2012).

<sup>17</sup> Cynthia Bauer, “Commander Recounts Historic C-17 Airdrop into Iraq,” April 11, 2003, <http://www.globalsecurity.org/wmd/library/news/iraq/2003/iraq-030411-amcns01.htm> (accessed December 18, 2012).

<sup>18</sup> Kimberly Spinner, “ATO 101: What Every Airman Should Know About an Air Tasking Order,” linked from The Pacific Air Forces Home Page at “News,” <http://www.pacaf.af.mil/news/story.asp?id=123269603> (accessed December 28, 2012).

<sup>19</sup> Robert W. Swisher, John F. Holly and David J. Foster, “Theater Mobility Forces: Command and Control Doctrine,” *Air Force Journal of Logistics* 29, no. 2 (Summer 2005): 11, in ProQuest (accessed December 27, 2012).

<sup>20</sup> U.S. Secretary of the Air Force, “Air Mobility Operations,” 8.

<sup>21</sup> Ibid., 7.

<sup>22</sup> Ibid.

<sup>23</sup> U.S. Federal News Service, “AMC Officials Unveil New Generation Command and Control System,” May 24, 2005, in Proquest (accessed December 27, 2012).

<sup>24</sup> Ellery D. Wallwork et al., “Operation Unified Response: Air Mobility Command’s Response to the 2010 Haiti Earthquake Crisis,” linked from Air Mobility Command History Office at Operation UNIFIED RESPONSE [pdf] <https://www.my.af.mil/gcss-af/USAF/ep/globalTab.do?channelPageId=s6925EC13535B0FB5E044080020E329A9> (accessed January 4, 2013), 2.

<sup>25</sup> Ibid., 7.

<sup>26</sup> Ibid., 9.

<sup>27</sup> Ibid., 97.

<sup>28</sup> Michael W. Kometer, *Command in Air War: Centralized vs. Decentralized Control of Combat Airpower*, Doctorate of Philosophy in Technology, Management, and Policy Thesis (Massachusetts Institute of Technology, May 2005), 33.

<sup>29</sup> Ibid.

<sup>30</sup> U.S. Army War College, Department of Military Strategy, Planning, and Operations, Case Study: “Case Study in Command and Control: Desert Shield/Desert Storm (SWA)” in Case Studies in Joint Functions (Carlisle Barracks, PA: U.S. Army War College, 2013), 185.

<sup>31</sup> Kometer, "Command in Air War," 34.

<sup>32</sup> U.S. Secretary of the Air Force, "Air Force Basic Doctrine," 39.

<sup>33</sup> Ibid., 41.

<sup>34</sup> John Schaefer, "Centralized Execution in the Air Force," *Air & Space Power Journal* 19, no. 3 (Fall 2005): 3, in ProQuest (accessed December 28, 2012).

<sup>35</sup> Ibid., 3.

<sup>36</sup> Steve Michael, "Air Force Doctrine and Leadership," *Aerospace Power Journal* 15, no. 2 (Summer 2001): 1, in ProQuest (accessed January 3, 2013).

